

DAILY FIELD ACTIVITY REPORT

PROJECT NAME: Pre-Remedial Design Investigation and Baseline Sampling, Portland Harbor Superfund Site

DATE: August 14, 2018

WEATHER: Mostly Sunny, High ~95 degrees F (high temperature outdoors) and 98 degrees F in the warehouse

Personnel and Visitors Onsite:

Research vessel Cayuse – CDM Smith: Joe Guggenberger; AECOM: Mark Tauscher; Geosyntec: Joe Hickey; Gravity Marine: Jeff Wilson, Ed Sloan

Research vessel Tieton – CDM Smith: Mary Lou Fox; AECOM: Michaela McCoog, Robert Schomp (afternoon only); Geosyntec: Alison Clements; Gravity Marine: Shawn Hinz, Ryan McEliece

Core Processing– CDM Smith: Jonni Wallingford; AECOM: Paul Myerchin, David Hose, Geosyntec: Erin Dunbar, Lucas Evans, Rachel Fischer

Planned Activity:

- Perform subsurface sediment coring at locations between river mile (RM) 4 and 7.
- Process cores collected on 8/13/2018 at the sample processing facility.

Activity Completed:

At the beginning of the day, a health and safety meeting was conducted by AECOM. Topics discussed included hot weather, hydration, emergency procedures, general work flow, slips, trips, and falls.

Joe Guggenberger performed oversight of subsurface sediment coring from 7:00 to 16:30 on board the Cayuse. Specific activities completed by the AECOM/Geosyntec team, with vessel support from Gravity Marine, are as follows:

- Subsurface sediment coring was conducted at four locations from RM 4 to 7. Details of sediment cores that were collected are provided below. Samples that were retained for processing and sampling were held on ice and then transported to the AECOM sample processing facility.

Mary Lou Fox performed oversight of subsurface sediment coring from 7:00 to 16:30 on board the Tieton. Specific activities completed by the AECOM/Geosyntec team, with vessel support from Gravity Marine, are as follows:

- GPS position checks were performed at the beginning and end of the day at the PH-2 control point at the Fred Devine property by Gravity. GPS coordinates were within 0.95 meters of the PH-2 survey coordinates, meeting the 1-2 m accuracy specification in the FSP.
- Subsurface sediment coring was conducted at three locations from RM 6 to 7. Details of sediment cores that were collected are provided below. Samples that were retained for processing and sampling were held on ice and then transported to the AECOM sample processing facility.

Jonni Wallingford performed oversight of core processing at the AECOM sample processing facility from 07:00 to 17:30. Activities completed by the AECOM/Geosyntec team at the sample processing facility are as follows:

- AECOM led the daily health and safety meeting discussing fatigue, slips/trips/falls, required PPE (safety glasses, steel-toe much boots, aprons/Tyvek when handling cores), prolonged standing, and importance of water breaks
- The PID was calibrated with 100 ppm isobutylene.
- A total of 29 sediment samples, five duplicates, two MS/MSDs, and an EPA split sample were collected from the sediment cores at 4 locations as summarized below.
- The sediment cores were photographed, screened with a photoionization detector (PID), described in a field log following soil classification procedures in the FSP, and geotechnical field tests were performed on the cores.
- All reusable equipment was decontaminated with a three-stage decontamination procedure including a tap water rinse, followed by an Alconox scrub, and finally a deionized water rinse. The initial tap water rinse water was containerized in a labeled 55-gallon drum.

Status of Schedule & Priority Work:

- Sediment coring and core processing will continue with two vessels through Wednesday
- Core processing will continue through Thursday.

Issues/Concerns/Resolutions (include work performed that was not planned or anticipated):

- GPS position check data was not collected by oversite staff on the Cayuse. Accuracy check will be verified through weekly field data submittals from the Pre-RD Group.

EPA Split Samples Collected, Measurements Made, Photographs: (List Locations, Matrix & Sample type):

One EPA split sample was collected.

Sediment cores were collected as described in the *Borings Completed* section below. Cores that were retained were placed on ice and transported to the sample processing facility.

Photographs of work were taken throughout the day and provided to EPA via email. Additional photos were taken and archived with a description included in the photolog Excel spreadsheet. Photos are maintained electronically in the ProjectWise project folder.

Borings Completed (Include total footage drilled for each boring):

The following sediment cores were completed on board the Cayuse (note the “-1” at the end of the sample number refers to the attempt number at a sample location):

- SC-S109-1 – within 50 ft radius, penetration depth 13.4 ft, recovery depth 10.8 ft, core retained for processing; a light petroleum-like sheen was observed during cutting of core barrel. No odor was identified. No sheen was observed on river surface.
- SC-S070-1 – within 50 ft radius, penetration depth 14.6 ft, recovery depth 12.6 ft, core retained for processing; a minimal amount of light petroleum-like sheen was observed on the river surface. NRC personnel were notified, and the sheen was removed by booms they installed around the coring area. No sheen was left on the river surface.
- SC-S065-1 – within 50 ft radius, penetration depth 15.9 ft, recovery depth 13.8 ft, core retained for processing
- SC-S092-1 – within 125 ft radius, penetration depth 13.2 ft, recovery depth 2.2 ft, core discarded; water too shallow near marked location and had to move further offshore. We were still within the targeted cap location. Woody debris was on the surface at this location.
- SC-S092-2 – within 125 ft radius, penetration depth 13.7 ft, recovery depth 2.2 ft, core retained for processing; water too shallow near marked location and had to move more offshore. We were still within the targeted cap location.

The following sediment cores were completed on board the Tieton (note the “-1” at the end of the sample number refers to the attempt number at a sample location):

- SC-S113-1 – within 50 ft radius, no sediment recovered, likely core barrel tipped when harder material was encountered, and boat was hit by a wake, the bow of the boat had a boom around it and NRC was present for all attempts at S113
- SC-S113-2 – within 50 ft radius, penetration depth 6.4 ft, recovery depth 5.1 ft, core retained for processing; a heavy petroleum-like sheen and moderate petroleum-like odor were observed for the S113 core, the contamination was noted as having a tar-like consistency, no sheen was observed on the river surface
- SC-S113-3 – within 125 ft radius, no recovery of sediment
- SC-S113-4 – within 125 ft radius, penetration depth 6.6 ft, recovery depth 4 ft, core discarded
- SC-S136-1 – within 50 ft radius, penetration depth 10 ft, recovery depth 7.6 ft, core discarded
- SC-S136-2 – within 50 ft radius, penetration depth 14.2 ft, recovery depth 11.8 ft, core retained for processing
- SC-S131-1 – within 50 ft radius, penetration depth 7.6 ft, recovery depth 5 ft, core discarded. NRC was on standby for all attempts at S131, no sheen observed
- SC-S131-2 – within 50 ft radius, penetration depth 8 ft, recovery depth 8.1 ft, core retained for processing, no sheen was observed
- SC-S131-3 – within 50 ft radius, penetration depth 8.8 ft, recovery depth 7.6 ft, core discarded, no sheen was observed

Core processing of two cores collected on 8/13/18, in addition to two cores collected early 8/14/18 were completed. Photographic documentation of the cores, lithologic logging, screening with a PID, geotechnical field tests, and sediment sampling was conducted at the sample processing facility and samples were collected from the following depth intervals

for laboratory analysis for borings SC-S151, SC-S150, SC-S146, and SC-S136. All depth measurements are based on recovered core length (not penetrated depth):

SC-S151

- 0-2 FT: very dark gray clayey silt, PID = 0.3 ppm
- 2-4 FT: very dark gray silt, PID = 1.1 ppm at 3.0 FT associated with trace fine organics, extra volume for MS/MSD collected
- 4-6 FT: very dark gray silt, PID = 0.7 ppm at 5.0 FT
- 6-8 FT: transition from very dark gray silt, to black seams, PID = 7.9 ppm, an EPA split was collected
- 8-10 FT: very dark gray silt, Pre-RD records dark brown blebs, PID = 2.6 ppm
- 10-12 FT: very dark gray/black clay, PID = 0.7 ppm

SC-S150

- 0-2.5 FT: dark gray clayey silt, PID reading = 3.5 ppm, trace fine organics
- 2.5-4 FT: dark gray clayey silt, PID reading = 1.7 ppm
- 4-6 FT: dark gray clayey silt, PID reading = 5.6 ppm, duplicate collected
- 6-7.5 FT: dark gray clayey silt, PID reading = 12.2 ppm
- 7.5-9 FT: dark gray clayey silt, PID reading = 7.1 ppm
- 9-11 FT: medium dark gray clayey silt, becomes dark brown at 10.8 FT; PID reading = 0.7 ppm
- 11-12.5 FT: very dark gray and brown clayey silt, PID reading = 0.7 ppm

SC-S146

- 0-2 FT: dark gray clayey silt, PID reading = 0.3 ppm (considered ambient air), 1 FT presence of waxy sheen and blebs observed by Pre-RD.
- 2-4 FT: dark gray clayey silt, PID reading = 0.4 ppm
- 4-6 FT: very dark gray clayey silt, PID reading = 1.2 ppm; 2" piece of wood at 4.0 FT, PID reading = 1.2 ppm, slight petroleum odor. Slight translucent rainbow sheen from pan at 4.8 FT.
- 6-8 FT: very dark clayey silt, PID reading = 0.5 ppm.
- 8-10 FT: grayish brown silty fine to medium sand, PID reading = 0.4 ppm

SC-S136

- 0-2 FT: dark gray clayey silt, substantial air pockets up to 3", PID = 0.3 ppm
- 2-4 FT: dark gray slightly silty with fine to medium sand, PID = 0.3 ppm
- 4-6 FT: dark gray slightly silty with fine black sand, PID = 0.4 ppm
- 6-8 FT: dark gray silt with fine to med sand, PID = 0 ppm
- 8-11.3 FT: dark gray silt with fine to med sand, PID = 0 ppm

On the core logging forms, depths based on recovered core length and "in-situ depths" (actual depths estimated by the observed percent recovery or percent compaction) are both shown.

Note: Sediment descriptions are simplified and AECOM/Geosyntec provided more detailed sediment descriptions in their sampling notes.

Two rinsate blanks were collected during the day from deionized water rinse from a decontaminated bowl and spoon.

Wastes Generated and How Handled:

- Sediment from cores S092, S136 and S131 that were not retained were returned to the river near the collection location after confirming there was no sheen observed. The sediment core from attempt # 4 at location SC-S113 was taken back to the warehouse for appropriate disposal. Standing water immediately above the sediment in both attempts 2 and 4 were containerized in a 5-gallon bucket and disposable materials such as paper towels and gloves soiled with the contamination were disposed of in a 55-gallon garbage bag identified as contaminated material and the 5-gallon bucket and labeled garbage bag were returned to the warehouse for proper disposal.
- Sediment from processed cores that were not retained for sampling were containerized in labeled 55-gallon drums.
- Methanol rinse used for decontamination of tools, spoons, and bowls that came into contact with separate phase hydrocarbons was containerized in a labeled 55-gallon drum.
- Disposable gloves, paper towels, and other general trash was containerized in a trash bag and removed daily for disposal in a municipal waste management dumpster.

Health and Safety Issues, Equipment Needs, Staffing:
None.

Signature: Jonni Wallingford, Mary Lou Fox, Joe Guggenberge

DATE August 14, 2018